



Appendix R4

Materials Trailer Specifications

**I-5/Yesler Way to NE 117th St. –
Pavement, Deck, and
Expansion Joints Project**

Request for Proposal
March 6, 2023

Specification Requirements	Check If Meet or Exceed	Describe Offered Alternatives
I. <u>General:</u> See Option under Section X.3 below. Trailer will be 20-ft. x 8-ft.		
1. This specification describes the requirements for a 32-foot highway construction site materials testing laboratory trailer.		
2. Supplier shall build a prototype unit in accordance with this specification for WSDOT inspection and approval prior to construction of remaining units.		
3. The layout and dimensions of the exterior and interior of the trailer shall be per the attached drawings.		
4. An estimated 5,000 pounds of laboratory equipment, furniture, and materials will be housed and transported in these trailers.		
5. The manufacturer of these trailers must meet the requirements of the Washington State Administrative Code (WAC) 296-150C.		
II. <u>Towing /Suspension /Brakes/12 volt DC Electrical:</u>		
1. The draw bar shall have an adjustable height 3-inch pintle and be 6 feet in length, measured from the trailer to the center inline of the pintle with safety chains, hooks and a 12 Volt break away protection system.		
2. Shall be equipped with a 12,000-pound (Model, 182400) Hammerblow tongue jack. Fully extended, the jack handle shall clear obstructions by at least four inches.		
3. The trailer shall be equipped with two or three identical automotive trailer torsion style axles with electrical brakes.		
State; number of axles bid. _____		
4. The axles and suspension combination shall have a load rating equal to or greater than the gross trailer weight, plus an additional 5,000 pounds of cargo.		

Specification Requirements	Check If Meet or Exceed	Describe Offered Alternatives
5. Wheels to be automotive trailer type with 5 or 8 mounting holes, mounted to the axles described in paragraph 4 above.	<hr/>	<hr/>
6. Shall have load range “E” trailer type radial tires mounted on the wheels described in paragraph 5 above.	<hr/>	<hr/>
7. Shall have a Berg Quick-Connect junction box (or equal) mounted on the inside part of the trailer draw bar.	<hr/>	<hr/>
8. All 12 volt DC transport wiring shall originate at the Berg junction box.	<hr/>	<hr/>
9. Shall have a round industrial seven-pole trailer to transporter 12-volt DC electrical plug (pigtail).	<hr/>	<hr/>
10. Trailer to transporter pigtail shall extend from the Berg junction box to the hitch plus 36 inches.	<hr/>	<hr/>
11. Shall have a sealed stop, turn and taillight assemblies such as Trucklite Series 50 or equal.	<hr/>	<hr/>
12. Shall have a license plate mounting bracket on the trailer rear visible to over taking traffic.	<hr/>	<hr/>
III. <u>Construction:</u>		
1. The trailer's structural design and construction must be capable of withstanding the adverse effects of frequent transports over unimproved secondary roads while loaded with 5,000 pounds cargo.	<hr/>	<hr/>
2. All floor joists will be on 16-inch centers.	<hr/>	<hr/>
3. The exterior of the unit's frame shall be covered with the manufacturer’s standard white aluminum siding which shall be securely fastened with stainless steel screws and rubber washers to prevent rusting, flexing, or warping during transport at highway speeds.	<hr/>	<hr/>
4. The underside of the trailer will be enclosed with 28-gauge galvanized sheet metal.	<hr/>	<hr/>

Specification Requirements	Check If Meet or Exceed	Describe Offered Alternatives
5. All interior walls and ceiling shall be finished with a Vinyl Clad finish. All seems and anchoring point will be covered with battens and rosettes.		
5. The partition wall shall have a solid core pocket door centered on the wall.		
6. Wheel wells shall not intrude into the finished interior floor.		
7. The sub floor shall be $\frac{3}{4}$ inch tongue and groove CDX plywood covered with Armstrong (light brown) suffeld vinyl flooring.		
8. The trailer shall have two Phillips Model 87 exterior metal doors with a fixed view light and dead bolt.		
9. The deadbolt and door locks shall be outfitted with Best Locks without lock cylinders.		
10. The trailer shall have four double-pained; 4/0 X 3/0 windows.		
11. Each window will be outfitted with functional interior mini blinds and interior mounted aluminum screens.		
12. The windows shall be screened; and they must open horizontally.		
13. The roof shall have the ability to support a snow load of 35 pounds per square foot.		
14. Each doorway must have railed aluminum stairs that are easily removed and transportable on the rear of the trailer. The landing will be constructed as small as possible while meeting the lawful requirement.		
15. The rear of the trailer will have a steel storage rack large enough to accommodate the steps, 50-foot power supply cable and spare tire for transport. <i>Note:</i> The drawing of the storage rack is intended to depict what the storage rack looks like; actual dimensions may vary based on space needed.		
16. The storage rack shall also have a lockable compartment for the 50-foot electrical cord.		

Specification Requirements	Check If Meet or Exceed	Describe Offered Alternatives
17. Shall have a locking, propane mounting bracket installed on the draw bar to accommodate two 10 gallon propane tanks.	<hr/>	<hr/>
18. Located on the street side interior wall above the counter top and to the right of the hood shall be a liquid propane connection with cap.	<hr/>	<hr/>
19. Propane piping will extend from the interior location down through the sub-floor and be routed along the underside of the trailer to the propane tank location and end with a capped bulkhead style connection.	<hr/>	<hr/>
20. The propane piping shall not protrude below the exterior bottom edge of the trailer.	<hr/>	<hr/>
21. The propane piping shall be mounted in such a manner as not to interfere with the trailer's suspension or trailer transport operations.	<hr/>	<hr/>

IV. Electrical:

1. Shall have both 110 and 220 electrical circuits that conform to Washington State's standard electrical code.	<hr/>	<hr/>
2. There shall be a surface mounted, 200 amp, and 42-circuit electrical service panel located as close to the left rear corner as possible.	<hr/>	<hr/>
3. Shall have a Crouse Hinds 200 amp power supply receptacle mounted on the exterior under-side of the trailer as close as possible to the 200-amp service panel.	<hr/>	<hr/>
4. Shall have a 50-foot long 200 amp rated exterior power supply cable with Crouse Hinds 200-amp power plug on (PN: AP 204 58 S22) both ends.	<hr/>	<hr/>
5. The trailer's interior shall have 2 four-plex GFCI receptacles located per the drawings.	<hr/>	<hr/>
6. On the exterior shall be 2 four-plex GFCI receptacles located twelve inches above the finished floor elevation and adjacent to each doorway.	<hr/>	<hr/>
7. All four GFCI receptacles shall be on the same dedicated 30-amp circuit with continuous power.	<hr/>	<hr/>

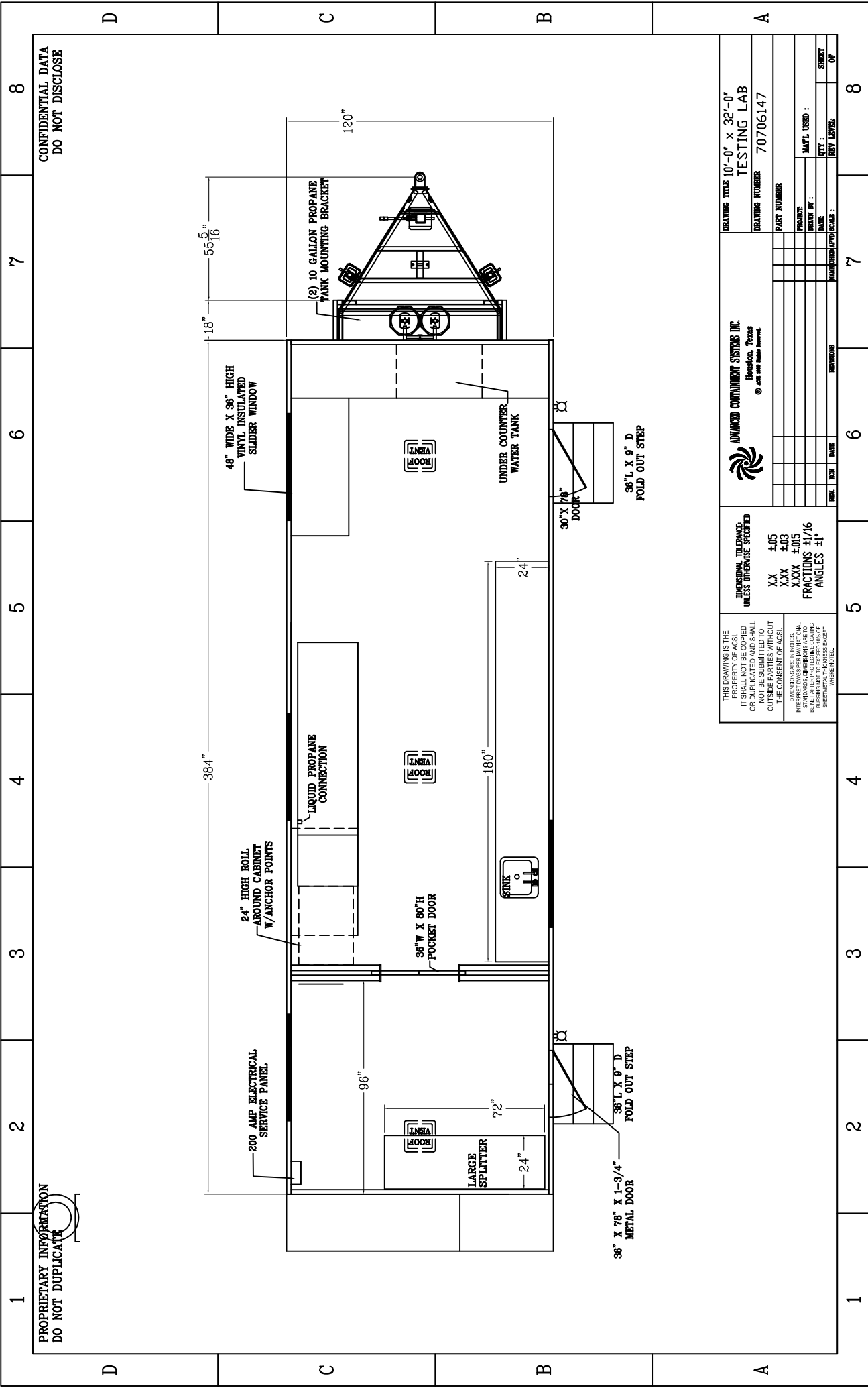
Specification Requirements	Check If Meet or Exceed	Describe Offered Alternatives
8. Shall have 110-volt, 30 AMP electrical outlets, spaced 24 inches on center and located above the counter splashguards. This will be a surface mounted electrical strip.	<hr/>	<hr/>
9. A 220-volt, 30 AMP duplex receptacle shall be installed at each location illustrated on the drawings.	<hr/>	<hr/>
10. Located on the left rear interior wall shall be a 110 Volt duplex receptacle. This receptacle shall be mounted as close to the floor as possible.	<hr/>	<hr/>
11. All of the electrical plugs located on the right side of the trailer shall be on a dedicated circuit for these specific plugs.	<hr/>	<hr/>
12. All wiring associated with the trailer will be copper core.	<hr/>	<hr/>
13. The trailer interior shall be lit by six (6) evenly spaced 2' x 4', two bulb fluorescent light fixtures.	<hr/>	<hr/>
14. Each light fixture shall have a removable plastic cover.	<hr/>	<hr/>
15. The trailer shall have a three-way interior light switch located at each doorway.	<hr/>	<hr/>
16. A weatherproof fluorescent light fixture shall be mounted on the trailer's exterior above each doorway. The switches for these lights shall also be in a standard location next to each doorway.	<hr/>	<hr/>
17. Shall be communication ready with one exterior telephone and data lines connection box and one interior telephone and data line connection box with input jacks.	<hr/>	<hr/>
18. Interior telephone and data connection box to be located above the front counter backsplash board.	<hr/>	<hr/>
19. The Exterior telephone and data connection box shall be located on the exterior front curbside of the trailer.	<hr/>	<hr/>
20. Located on the wall at the sink area shall be an off/on switch for the self-contained supply water pump.	<hr/>	<hr/>

Specification Requirements	Check If Meet or Exceed	Describe Offered Alternatives
V. <u>Water Tank and Plumbing:</u>		
1. The trailer shall be plumbed to accommodate both an on demand commercial and self-contained water supply source; delivering water to the sink on demand.		
2. Shall have a 100-gallon polyethylene self-contained water supply tank with pump, plumbing and valves necessary to supply water to the sink when commercial water supply is not available.		
3. Water tank shall be mounted at the lower front interior wall in an enclosed and finished cabinet with doors.		
4. There shall be a 2-inch galvanized pipe located on the front exterior curbside of the trailer to accommodate pressure filling and gravity draining of the water tank. This pipe will be connected to the bottom of the water tank and will have a:		
a. Shut off valve.		
b. ¾ inch garden hose connection with a plug/cap.		
c. Shall have bypass valve for the self-contained water supply when using commercial water supply.		
d. 2-inch fire hose type connection with a cam-lock fitting and plug/cap.		
e. The fill pipe will be equipped with a 60 psi relief valve.		
f. Water level sight glass indicator.		
3. All other lines connected to the water tank will be removable ½ inch, 100-PSI polybutylene.		
4. There shall be a 25-inch x 19-inch X 18 inch deep, self-rimming, stainless steel sink, with a single lever 12-inch gooseneck faucet located per the drawing.		
5. The sink shall have a sprayer with at least 36 inches of hose.		

Specification Requirements	Check If Meet or Exceed	Describe Offered Alternatives
6. The sink will drain to the outside through a trap-less 1-½ inch line having a ball valve with a removable ¾ inch garden hose bib affixed to trailer's floor.	<hr/>	<hr/>
VI. <u>Heating, Ventilation, and Air Conditioning:</u>		
1. The trailer shall have a 230/208-volt, single phase, front mounted HVAC system capable of maintaining the trailer's interior temperature at 72 degrees F when the outside ambient temperature range is +32 to +110 degrees F.	<hr/>	<hr/>
2. The trailer shall have a single thermostat that will automatically switch between heating and cooling. The thermostat will be located on the partition wall in close proximity to the sink.	<hr/>	<hr/>
3. All ducting shall be installed above the finished ceiling.	<hr/>	<hr/>
4. Air diffusers shall be mounted along the longitudinal centerline of the trailer.	<hr/>	<hr/>
5. The trailer shall have three individually switched two speed; 200 CFM, high velocity exhaust fans. Fans will be located as per the attached drawings.	<hr/>	<hr/>
6. Each individual fan switch will be co-located with the fan and accessible from the floor.	<hr/>	<hr/>
7. Shall be equipped with a 30-inch deep x 48-inch long ventilation hood with a 200 CFM evacuation fan. The fan switch shall be located on the right side of the hood.	<hr/>	<hr/>
8. This hood will be constructed of 16-gauge galvanized steel and have a clearance of 48 inches above the counter top.	<hr/>	<hr/>
9. The secondary fresh air return will be equipped with manually operated louvers.	<hr/>	<hr/>

Specification Requirements	Check If Meet or Exceed	Describe Offered Alternatives
VII. <u>Cabinets:</u>		
1. All cabinets and counters will be laid out and sized per the attached drawings and shall be constructed and installed to support at least 500 pounds.	_____	_____
2. All counter tops shall be the manufacturer's standard.	_____	_____
3. The interior of all cabinets shall be finished and their facings and doors shall be finished with Wilsonart, Chemsurf D50-13 Light Brown.	_____	_____
4. All base cabinets shall have one 4-inch drawer and one adjustable shelf which will be adjustable in one-inch increments.	_____	_____
5. All doors and drawers shall have a self-locking device when in the closed position.	_____	_____
6. Drawer guides shall be self-closing and self-aligning with a 100 pounds capacity.	_____	_____
VIII. <u>Exterior Finish:</u>		
WSDOT expects professional workmanship on all products purchased. With this in mind, the following finishing requirements will be closely scrutinized during the specification compliance inspection.	_____	_____
1. There shall be no welding scale, roughness, sharp corners; or rust stains on the unit.	_____	_____
2. The frame and undercarriage shall be primed and coated with the manufacture's standard black paint with a five-year warranty.	_____	_____
IX. <u>Publications:</u>		
1. Each unit shall be delivered with an operator's manual and an as built drawing depicting the construction, electrical, and plumbing features of the trailer.	_____	_____
2. Bidders shall provide the Service, and Parts Manuals as annotated below		
<u>1</u> Parts Manual (Per Unit)	_____	_____

Specification Requirements	Check If Meet or Exceed	Describe Offered Alternatives
1 Service Manual (Per Unit)		
<u>X. Options:</u>		
1. Located on the street side and forward of the partition wall, shall be a roll around cabinet capable of holding 500 pounds. The cabinet will have four 360 degree swiveling wheels with foot operated locks. This cabinet shall have a height of 24 inches and include two floor anchor points to lock cabinet down during transport.		
\$ _____		
3. Manufacturers standard construction style trailers to include interior and exterior lighting, Heating and A/C, with no interior cabinets, counters or walls (Basic Unit)		
a. 8 foot wide X 20 foot long \$ _____		
b. 8 foot wide X 30 foot long \$ _____		
c. 10 foot wide X 20 foot long \$ _____		
d. 10 foot wide X 30 foot long \$ _____		
4. Optional street side counter: Currently the drawings show and empty space for the installation of a WSDOT provided Gyratory compactor. Bidder shall provide option pricing for a continuous counter top and lower cabinets without the opening. The top portion of this counter will be covered with a 1/16 inch thick, full depth stainless steel top. The front edge of this section will be wrapped by the stainless steel. The stainless will extend from the rear of the opening to the front wall of the trailer. (Approx. 11 feet 4 inches in length)		
Add \$ _____		



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